

1 **Q: What feedback was received from Tooele County, other communities and the public**  
2 **in response to the proposed route between the Limber Substation and the Oquirrh**  
3 **Substation?**

4 A: General comments from the public and communities acknowledged and supported the  
5 need for the new transmission lines and other portions of the Project. However, the  
6 feedback received was negative toward the transmission line route along the southern part  
7 of the Tooele Valley and along the east bench. Those in opposition to the alignment  
8 along the southern portion of the Tooele Valley suggested that the line be constructed in  
9 other locations, as discussed in more detail later in this testimony.

10  
11 **Q: What did the Company do to address the opposition expressed by the communities?**

12 A: The Company convened and facilitated three conflict resolution meetings in August and  
13 September 2009 with key stakeholders who had commented on the Draft EIS. The  
14 meetings included staff and elected officials from Tooele County, Tooele City and  
15 Grantsville, as well as other interested parties. The purpose of the conflict resolution  
16 meetings was to determine if there were any alternate routes supported by the key  
17 stakeholders that would fulfill the Company's siting and system criteria, and  
18 engineering/design factors for the proposed Limber to Oquirrh transmission line segment.

19  
20 **Q: Please describe the alternative routes proposed by the conflict resolution members.**

21 A: In order to describe the routes, I will break the alternatives proposed into the following  
22 four categories: (1) the "Railroad Routes" See Exhibit BDS-7.1 (Map of Railroad  
23 Routes), (2) the "the Army Depot Routes" See Exhibit BDS-7.2 (Map of Army Depot  
24 Routes), (3) the "Silcox Canyon Route" See Exhibit BDS-7.3 (Map of Silcox Canyon  
25 Route), and (4) the "Grantsville Route", which required the relocation of the future  
26 Limber substation. See Exhibit BDS-7.4 (Map of Grantsville Route – Option 1) and  
27 Exhibit BDS-7.5 (Map of Grantsville Route – Option 2). Each of the attached exhibits  
28 depict the alternative routes considered within each of the categories.

1 **Q: Did the Company analyze the proposed alternative routes?**

2 A: Yes. All routes proposed by the communities were analyzed for general environmental  
3 issues, constructability, reliability, safety, impact to permitting and NEPA schedule, and  
4 cost.

5  
6 **Q: Were any of the Railroad Routes and the Army Depot Routes ultimately deemed  
7 acceptable?**

8 A: No. Grantsville residents opposed the Army Depot Route segment along the north edge  
9 of the Tooele Army Depot due to its proximity to residential developments. See Exhibit  
10 BDS-7.2 (Map of Army Depot Routes)

11  
12 Tooele City initially stated that a route through Tooele City would be preferred over the  
13 Company's proposed route along the southern part of the Tooele Valley. See Exhibit  
14 BDS-7.1 (Map of Railroad Routes). Based on this representation, the Company  
15 conducted a more detailed analysis of these routes, which included discussions and input  
16 from other landowners along the alignment.

17  
18 At the time of the third conflict resolution meeting, although the Company had not  
19 completed its full siting and system criteria analysis, the Company shared its preliminary  
20 findings relative to the constructability of all of the Railroad and Army Depot Routes.  
21 These findings indicated that all of these routes were constructable. However, during that  
22 meeting, Tooele City changed its prior position, stating that it would not agree to *any*  
23 route through the Tooele City limits.

24  
25 **Q: Was the Silcox Canyon Route deemed acceptable?**

26 A: No. Both the Company and the BLM deemed the route unacceptable.

27  
28 The Company's analysis of the siting and system criteria demonstrated that the high  
29 elevation of 9,500 feet and the line location would require additional engineering and  
30 construction techniques that would create a larger impact to maintenance, cost, and the  
31 environment when compared to the proposed route. See Exhibit BDS-7.3 (Map of Silcox

1 Canyon Route). The route would require more extensive access roads, larger structures,  
2 and more advanced equipment, and would eliminate the potential use of helicopter  
3 construction of the tubular steel towers at the high elevation. In addition, long-term  
4 maintenance of the line would be impacted due to limited access and exposure to extreme  
5 weather, and the environmental impact would increase due to the route requiring more  
6 extensive access roads.

7  
8 In addition, the BLM deemed the route unacceptable due to the increased environmental  
9 impacts resulting from the extensive access roads required, wildlife habitat  
10 fragmentation, and vegetation clearing.

11  
12 **Q: Was the Grantsville Route deemed acceptable?**

13 **A:** No. Initially, the communities proposed a route placing both the Limber to Terminal and  
14 Limber to Oquirrh double-circuit 345 kV lines north out of the proposed future Limber  
15 substation, west of Grantsville, then east through Lakepoint and around the north end of  
16 the Oquirrh Mountain range into the Salt Lake Valley, with one line proceeding to  
17 Terminal substation and the second line turning south to Oquirrh substation. The  
18 alignment is constrained by the I-80 corridor, the Great Salt Lake, the Tooele Valley  
19 Airport to the south, two existing single-circuit 138 kV lines and several lower voltage  
20 lines, railroad lines, and the Kennecott Copper Operations. Based on the Company's  
21 analysis of these constraints, it was determined that there is not a sufficient corridor to  
22 construct and operate two double-circuit 345 kV transmission lines in this area.

23  
24 As a result of the Company's deeming the initial Grantsville route as unacceptable, the  
25 conflict resolution stakeholders modified the initial route to relocate one of the 345 kV  
26 lines to the southeast near Stansbury and continue through the Carr-Fork WMA to Pole  
27 Canyon. This route was also constrained by the I-80 corridor, the Great Salt Lake, and  
28 the Tooele Valley Airport to the south. The modified route also proposed two  
29 alternatives locations for the future Limber substation location. A summary of the  
30 proposed, modified Grantsville Routes and substation locations is provided below.

1        Option 1 - See Exhibit BDS-7.4 (Map of Grantsville Route – Option 1).

2        The Company's siting and system criteria analysis and engineering/design criteria of the  
3        Option 1 transmission route determined the route would require (1) an additional 15.5  
4        miles of 500 kV transmission line, (2) an overall increase of 1.5 miles associated with the  
5        Limber to Oquirrh and Limber to Terminal 345 kV double-circuit line lengths, and (3)  
6        alternative engineering techniques to address corrosive and unstable soil conditions  
7        requiring larger transmission structure foundations. These adjustments resulted in  
8        estimated increased cost to the Project of up to \$9.1 million.

9  
10       Based on the Company's siting and system criteria analysis and engineering/design  
11       factors for the substation location, Option 1 was also deemed unacceptable to the  
12       Company due to the need for substantially larger foundations and alternative engineering  
13       techniques for the substation due to soil types. The soil conditions would require  
14       alternative engineering techniques with respect to unstable and corrosive soils, and the  
15       high water table associated with this route. The alternative engineering techniques would  
16       consist of larger foundations for the substation, protective coatings, and extensive backfill  
17       of more stable soils for the substation, resulting in approximately \$43 million of  
18       additional cost.

19  
20       The proposed, modified transmission line route would require both the Limber-Oquirrh  
21       and the future Limber-Terminal double-circuit 345 kV lines to be constructed in close  
22       proximity with a minimum 1,000-foot separation for approximately 8 – 10 miles,  
23       depending on the substation location. As a result these proposed route options do not  
24       meet the Company's siting and system criteria.

25  
26       Option 2 - See Exhibit BDS-7.5 (Map of Grantsville Route – Option 2)

27       The Company's siting and system criteria analysis and engineering/design factors of the  
28       Option 2 transmission route determined the route would require (1) an additional 8.75  
29       miles of the 500 kV transmission line, (2) an overall increase of 17 miles associated with  
30       the Limber to Oquirrh and Limber to Terminal 345 kV double-circuit line lengths, and  
31       (3) alternative engineering techniques due to corrosive and unstable soil conditions

1 requiring larger transmission structure foundations. These adjustments have been  
2 estimated to increase the Project costs up to \$35.4 million.

3  
4 The proposed, modified transmission line route would require both the Limber-Oquirrh  
5 and the future Limber-Terminal double-circuit 345 kV lines to be constructed in close  
6 proximity with a minimum 1,000-foot separation for approximately 15 – 17 miles,  
7 depending on the substation location. As a result these proposed route options do not  
8 meet the Company’s siting and system criteria and engineering/design factors.

9  
10 In summary, the Grantsville Route was deemed unacceptable to the Company based on  
11 its siting and system criteria analysis and engineering/design factors.

12  
13 **Q: During this process, did the Company exhaust all of the proposed alternative routes  
14 proposed by the communities and key stakeholders?**

15 A. Yes. The Company reviewed all proposed alternatives advanced by the communities and  
16 the key stakeholders. However, no alternative was found to be acceptable to all parties  
17 involved.

18  
19 **Q. Although the alternative routes identified through the conflict resolution meetings  
20 were found to be unacceptable, did the Company make adjustments to the  
21 Company’s proposed route between the future Limber Substation and the existing  
22 Oquirrh Substation?**

23 A: Yes. Based on public and community comments, specific adjustments on the proposed  
24 route between future Limber and existing Oquirrh included refinements to move the line  
25 further south away from residences in the foothills south of Tooele City, to minimize  
26 visual impacts, to avoid crossing future gravel operations, and to relocate the crossing of  
27 the Settlement Canyon Reservoir.